



Appl. No 10/684,031
Amdt. Dated Feb 28, 2006
Amended pursuant to 37 CFR 1.116

Clean Claims

1-65. (cancelled)

66. (original) A data collection and display system for a proper vehicle comprising:
at least one sensing means producing at least one source electric signal proportional to the
distributed driving force of said proper vehicle;
at least one calculating means converting said at least one source electric signal to at least
one electric display signal;
at least one electric signal transmission means connecting said sensing means to said at least
one calculating means;
at least one display means; and
at least one electric display signal transmission means connecting said at least one
calculating means to said at least one display means,
whereby said at least one electric signal transmission means transfers said at least one source
electric signal from said sensing means to said at least one calculating means, said
calculating means creating at least one electric display signal, said at least one
electronic display signal transmitted by said at least one electric display signal
transmission means to said at least one display means, said display means creating an
image visible to the operator of said proper vehicle, said image proportionally depicting
said driving force.

67. (amended) A data collection and display system as in Claim 66, wherein said at least one
sensing means is a Hall effect sensor.

1 68. (amended) A data collection and display system as in Claim 66, wherein said at least one
2 sensing means monitoring a conductor, said conductor transmitting said control of said
3 driving force [[to said at least one clutch]], said at least one sensing means comprised
4 of a clampon induction sensor or an in-line induction sensor or an in-line series current
5 sensor.

6
7 69. (new) A data collection and display system as in Claim 66 wherein, said
8 image is at least one bar chart, scalar bar chart, or an image displaying the torque or
9 braking force delivered to the wheels or an image displaying the torque or braking force
10 delivered to the front pair of wheels and to the rear pair of wheels or an image
11 displaying the slippage of one or more wheels with regard to the other wheels.

12
13 70. (original) A data collection and display system as in Claim 66 wherein, said image is
14 comprised of a display varying in time in one or more characteristics to include color,
15 hue, shading, density of cross hatching, contrast, content, shape, orientation, pattern
16 and/or illumination.

17
18 71. (original) A data collection and display system as in Claim 66, wherein said at least one
19 display means is an LED, LCD, vacuum fluorescent means, GPS display and/or trip
20 computer, numerical display, gauge, meter and/or PDA.

21
22 72. (original) A data collection and display system for a proper vehicle comprising:
23 a CPU controlling engagement forces of one or more of the wheels;

1 at least one sensing means producing an electrical input signal proportional to said
2 engagement forces and providing said signal to said CPU;
3 at least one display signal generated by said CPU derived from said input signal, said display
4 signal proportional to said engagement forces; and
5 at least one display device;
6 whereby said at least one display signal is transferred from said CPU to said display device,
7 said display device displaying an image proportional to said engagement forces to the
8 operator.

9
10 73. (original) A data collection and display system as in Claim 72 wherein, said image is
11 comprised of a display varying in time in one or more characteristics to include color,
12 hue, shading, density of cross hatching, contrast, content, shape, orientation, pattern
13 and/or illumination.

14
15 74. (original) A data collection and display system as in Claim 72, wherein said at least one
16 display means is an LED, LCD, vacuum fluorescent means, GPS display and/or trip
17 computer, numerical display, gauge, meter and/or PDA.

18
19 75. (new) An apparatus comprising:
20 at least one signal source producing sensory data;
21 a processing device operably coupled to said signal source to transform said sensory data into
22 a display signal; and
23 a display device to receive and display said display signal as a viewable image, said image

1 comprised of information regarding at least one operating parameter, said at least one
2 operating parameter comprised of torque and/or braking forces delivered at the wheels
3 of a motor vehicle;
4 whereby said image is observable by the operator of said motor vehicle.

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6 76. (new) An apparatus as in Claim 75 wherein said at least one signal source is a sensor
7 comprised of a brake signal amplitude sensor, a torque amplitude signal sensor,
8 an in-line induction sensor, an inserted serial current sensor, a clampon induction
9 sensor and/or a flux sensor.

10
11 77. (new) An apparatus as in Claim 75 wherein said image is at least one bar chart, scalar bar
12 chart, or bar chart in pie segment format or, is an image displaying the torque
13 or braking force delivered to the wheels or, is an image displaying the torque
14 or braking force delivered to the front pair of wheels and to the rear pair of wheels
15 or an image displaying the slippage of one or more wheels with regard to the other
16 wheels.

17
18 78. (new) An apparatus as in Claim 75 wherein said processing device is comprised of a
19 vehicle CPU or a display CPU.

20
21 79. (new) An apparatus as in Claim 75, wherein said display device is a LED, LCD, vacuum
22 fluorescent means, GPS display or trip computer, numerical display, gauge, meter
23 and/or PDA.

1 80. (new) An apparatus as in Claim 75, wherein said at least one image is comprised of a
2 highlighted image and/or a display varying in time in one or more characteristics
3 to include color, hue, shading, density of cross hatching, contrast, content, shape,
4 orientation, pattern and/or illumination.

5
6 81. (new) A system comprising:

7 a first data signal generation means affixed to or within a vehicle and producing a first
8 data signal, said first data signal generation means comprised of a lateral acceleration
9 sensor;

10 a first interface to receive said first data signal;

11 a second data signal generation means affixed to or within said vehicle and producing a
12 second data signal, said second data signal generation means comprised of a
13 harmonic frequency sensor;

14 a second interface to receive said second data signal;

15 a processing device operably coupled to said interfaces to transform said data signals into at
16 least one frame of display data; and

17 a display device displaying said at least one frame of display data for the operator of said
18 vehicle;

19 whereby said display data comprises at least one image indicating the approach of a
20 rollover condition of said vehicle.

21
22 82. (new) A system as in Claim 81, wherein said processing device is comprised of a vehicle
23 CPU or a display CPU.

1 83. (new) A system as in Claim 81, wherein said display device is a LED, LCD, vacuum
2 fluorescent means, GPS display and/or trip computer, numerical display, gauge,
3 meter and/or PDA.
4

5 84. (new) A system as in Claim 81 wherein said image is comprised of a display varying in
6 time in one or more characteristics to include color, hue, shading, density of cross
7 hatching, contrast, content, shape, orientation, pattern, illumination and/or highlighting.
8

9 85. A system as in Claim 81 wherein said image is comprised of a display of at least one bar
10 chart, scalar bar chart or bar chart in pie segment format.
11

12 86. (new) A method comprising:
13 generating a data signal from at least one sensor attached on or within a motor vehicle;
14 processing said data signal producing at least one display image; and
15 displaying said at least one display image on a display device observable by the
16 operator of said motor vehicle;
17 whereby said at least one display image comprising at least one image representing
18 information regarding at least one vehicle operating parameter, said at least one
19 operating parameter comprised of torque and/or braking forces delivered at the wheels
20 of said motor vehicle.
21

22 87. (new) A method as in Claim 86, wherein said vehicle is a four-wheel drive vehicle.

1 88. (new) A method as in Claim 86, wherein one of said operating parameters displayed is the
2 steering angle of the front wheels.

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4 89. (new) A method as in Claim 86, wherein said at least one sensor is comprised of a torque
5 amplitude signal sensor.

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7 90. (new) A method as in Claim 86, wherein said processing is by said vehicle's CPU or by a
8 display CPU.

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10 91. (new) A method as in Claim 86, wherein said displaying is with a LED, LCD, vacuum
11 fluorescent means, GPS display, numerical display, gauge, meter and/or PDA.

12
13 92. (new) A method as in Claim 86, wherein said at least one display image is a bar chart,
14 scalar bar chart, bar chart in pie segment format, a numerical display or an image
15 displaying the torque or braking force delivered to the wheels or an image
16 displaying the slippage of one or more wheels with regard to the other wheels.

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18 93. (new) A method as in Claim 86, wherein said image is comprised of a display varying in
19 time in one or more characteristics to include color, hue, shading, density of cross
20 hatching, contrast, content, shape, orientation, pattern, illumination and/or highlighting.

21
22 94. (new) An image creating and sound creating device comprising:

1 a first data signal generation means affixed on or within a vehicle and producing a first data
2 signal;
3 a first interface to receive said first data signal;
4 a second data signal generation means affixed on or within said vehicle and producing a
5 second data signal, said second data signal generation means comprised of a
6 harmonic frequency sensor;
7 a second interface to receive said second data signal;
8 a processing device operably coupled to said interfaces to transform said first and second data
9 signals into at least one frame of display data and into an electronic sound signal;
10 a display device displaying said at least one frame of display data for the operator of
11 said vehicle; and
12 a sound producing device converting said electronic sound signal to audible sound for said
13 operator;
14 whereby said display data comprising said at least one frame of display data is displayed
15 and/or said sound producing device creates said audible sound regarding at least one
16 vehicle operating parameter and said at least one operating parameter is the approach
17 of a rollover condition of said vehicle.

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19 95. (new) The device of Claim 94, wherein said vehicle is a four-wheel vehicle.

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21 96. (new) The device of Claim 94, wherein said [a] first data signal generation means is a
22 lateral acceleration sensor.

1 97. (new) The device of Claim 94, wherein said processing device is comprised of a vehicle
2 CPU or a display CPU.

3
4 98. (new) The device of Claim 94, wherein said display device is a LED, LCD, vacuum
5 fluorescent means, GPS display and/or trip computer, numerical display, gauge, meter
6 and/or PDA.

7
8 99. (new) The device of Claim 94, wherein said image is at least one bar chart, scalar bar
9 chart, bar chart in pie segment format, a numerical display and/or an image displaying
10 the approach of a rollover condition of a vehicle.

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12 100. (new) The device of Claim 94, wherein said at least one image is comprised of a display
13 varying in time in one or more characteristics to include color, hue, shading, density of
14 cross hatching, contrast, content, shape, orientation, pattern, illumination and/or
15 highlighting.

16
17 101. (new) An item comprising a medium storing instructions that, if executed, enable a
18 system to perform steps comprising:
19 receiving a data signal comprised of information regarding at least one operating
20 parameter;
21 generating from said data signal a command;
22 transforming said data signal based on the command into display information; and
23 displaying said display information on a display for the operator of a motor vehicle;

1 whereby said at least one operating parameter comprises the power consumption of a
2 vehicle component.

3
4 102. (new) The item of Claim 101, comprising a medium storing instructions that, if executed,
5 enable a system to perform steps to transform said data signal by using a vehicle CPU
6 or a display CPU.

7
8 103. (new) The item of Claim 101, comprising a medium storing instructions that, if executed,
9 enable a system to display said display information on a LED, LCD, vacuum fluorescent
10 means, GPS display and/or trip computer, numerical display, gauge, meter and/or PDA.

11
12 104. (new) The item of Claim 101, comprising a medium storing instructions that, if executed,
13 enable a system to display an image comprised of at least one bar chart, scalar bar
14 chart, bar chart in pie segment format, or at least one image of a power consumption
15 component and associated bar chart, or an image of at least one power consumption
16 component and associated numerical display.

17
18 105. (new) The item of Claim 101, comprising a medium storing instructions that, if executed,
19 enable a system to display said image varying in time in one or more characteristics to
20 include color, hue, shading, density of cross hatching, contrast,
21 content, shape, orientation, pattern, illumination and/or highlighting.

22
23 106. (new) A data collection and display system for a proper vehicle comprising:

1 a first CPU controlling engagement forces of one or more of the wheels;
2 at least one sensing means producing an electrical input signal proportional to said
3 engagement forces and providing said signal to a second CPU;
4 at least one display signal generated by said second CPU derived from said input signal, said
5 display signal proportional to said engagement forces; and
6 at least one display device;
7 whereby said at least one display signal is transferred from said second CPU to said display
8 device, said display device displaying an image proportional to said engagement forces
9 to the operator.

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11 107. (new) A data collection and display system as in Claim 106 wherein, said image is
12 comprised of a display varying in time in one or more characteristics to include color,
13 hue, shading, density of cross hatching, contrast, content, shape, orientation, pattern,
14 illumination and/or highlighting.

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16 108. (new) A data collection and display system as in Claim 106, wherein said at least one
17 display means is an LED, LCD, vacuum fluorescent means, GPS display and/or trip
18 computer, numerical display, gauge, meter and/or PDA.

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20 109. (new) A data collection and display system as in Claim 106, wherein said first CPU and
21 said second CPU are the same CPU.